Thursday, April 1, 2004

7:00 am - 4:30 pm **Registration** ***Mezzanine***

7:30 am - 3:30 pm **Vendor Exhibits** ***Mezzanine***

8:00 am - 11:15 am **Workshops**

Basics of Cartography *Clarendon*

Beginning

Presenter

James L. LeBeau **Southern Illinois University at Carbondale**

Basics of Cartography

The growth of automated mapping in criminal justice has been phenomenal. During the rush to get going with mapping, new users have focused on the technology of making maps while ignoring the science and art of making a map. This serious oversight limits the efficiency, effectiveness, and in some instances, the credibility of crime mapping. This workshop will feature discussion and illustration of the important basics of cartography. Topics include: the elements of a map; generalization and scale; coordinate systems; visualizing different data scales; symbols and visual variables; color design; and different types of thematic maps.

DMS Portal *Hancock*

General Audience

Presenters

Melinda K. Higgins **Georgia Tech Research Institute**
and
Michael L. Thomas **U.S. Department of Defense**

National Guard Digital Mapping Server Portal: Embodying a "One-Stop" Portal Approach for Total GIS Needs

(Melinda K. Higgins, Michael L. Thomas, Nick Faust, Frank McCreedy, John Sample, Kevin Shaw, Rickey Thomas)

The National Guard Bureau Counterdrug Office has implemented a Digital Mapping Server (DMS) portal, embodying a "One-Stop" portal approach for total GIS needs. DMS supports GIS requirements with open source mapping data and tools provided at no-cost to law enforcement, saving time, money, and effort. The presentation introduces the DMS portal and how to use it in various law enforcement operations. DMS ties many disparate GIS databases together into a single interface and can perform map projection translation on the fly, allowing users to add datasets from their own systems.

Fusion Training: Creating a GIS Analysis Product *Georgian*

General Audience

Presenters

Wesley D. Baker — **National Geospatial Intelligence Agency**
and
Michael Ellicott — **TBD**
and
Jared L. Ware — **National Geospatial Intelligence Agency**

Geospatial Data Fusion Training for Homeland Security in Urban Environments – Creating a GIS Analysis Product from Start to Finish

(Jared L. Ware, Michael Ellicott, Jr. and Wesley D. Baker)

The presentation discusses techniques for developing homeland security training using geospatial data fusion for a wide range of users. A credible geospatial data product can be used to enhance analysis, ultimately helping decisionmakers to devote the proper personnel and resources to mitigating criminal acts and protecting the public and its property. The focus will be on gathering geospatial data from an urban environment and producing homeland security analysis products. The aim is to provide techniques that develop training in geospatial analysis for a wide variety of users.

Geographically Weighted Regression *Berkeley*

Intermediate

Presenters

Martin Charlton — **University of Newcastle**
and
A. Stewart Fotheringham — **University of Newcastle**

Geographically Weighted Regression and Associated Developments

Geographically Weighted Regression (GWR) is a statistical technique that allows variations in relationships for spatial units in some study area to be measured within a single modeling framework. This workshop will introduce attendees to the nature of GWR, local modeling, and local statistics. It will also consider the use of GWR through a series of worked examples based on crime and socio-economic statistics for England and Wales, showing the use of GIS in visualizing outputs from a GWR analysis.

Introduction to CrimeStat III *Stanbro*

Advanced

Presenters

Ned Levine — **Ned Levine & Associates**
and
Richard Block — **Loyola University Chicago**

Introduction to CrimeStat III

This workshop will present an introduction to CrimeStat III, the spatial statistics program developed by Ned Levine & Associates and distributed by the Mapping and Analysis for

Public Safety program at the National Institute of Justice. The workshop is targeted to intermediate GIS users.

Mapping for Managers *Plaza Ballroom*

General Audience

Presenter

Noah J. Fritz — **National Law Enforcement and Corrections Technology Center - Rocky Mountain**

Crime Mapping for Managers

Police departments around the world are beginning to use Geographic Information Systems (GIS) for crime mapping in general operations. Crime and intelligence analysis allow leadership to make better-informed decisions regarding tactical, strategic and administrative actions. This session covers crime mapping and crime/intelligence analysis for mid and upper-level managers. Topics like COMPSTAT, problem analysis, resource allocation, community policing, privacy-security, regional data sharing, intelligence-led policing, and crime series analysis will be discussed in this session. A variety of possible mapping outputs/products will illustrate what the crime mapping staff in an agency could produce. The session closes with a question-and-answer session to address audience members' issues on implementing and managing a GIS-based crime analysis unit.

Techniques of Spatial Regression *Arlington*

Advanced

Presenter

Sanjeev Sridharan — **Westat**

Techniques of Spatial Regression

Spatial regression techniques have begun to be implemented in a number of fields, including criminology, economics, demography, and public health. In this presentation, researchers review some of the spatial analytical techniques and their utility in studying criminological processes. There are three goals, to: (1) Develop an intuitive understanding of the utility of spatial regression techniques in social and policy sciences, (2) Develop a working understanding of using spatial analysis software (specifically Spacestat and GeoDa) 3. Develop an understanding of the connections between specific spatial statistical techniques and substantive social processes (e.g., operationalizing diffusion).

11:30 am - 1:00 pm — **Lunch on your Own**

1:00 pm - 2:30 pm — **Concurrent Panels**

Spatial Technology Showcase Session *Hancock*

General Audience

Corrections, Probation, and Parole I *Stanbro*

General Audience

Moderator

Andrew L. Goldberg **National Institute of Justice**

Presenters

Mike Carmichael **Winston-Salem State University**

Reentry and Revitalization: Using Mapping and Analysis for Community Problem-Solving

(Mike Carmichael, Sylvia Oberle)

This presentation will examine ongoing research and practical application of mapping that analyze issues related to ex-prisoners reentry and revitalization in an urban neighborhood in Winston-Salem, North Carolina. The mapping project tracks concentrations of returning ex-prisoners and other neighborhood indicators. It works with residents to identify both traditional and non-traditional resources and assets to assist the transition of ex-prisoners into the community and to stabilize the neighborhood.

Nancy G. La Vigne **The Urban Institute**

Reentry Mapping Network: Using Spatial Data to Inform Local Prisoner Reentry Efforts

(Nancy G. La Vigne, Sylvia Oberle, Jim B. Pingel, Jamie Watson)

The Reentry Mapping Network (RMN) is a partnership among community-based organizations and The Urban Institute, designed to create community change through the mapping and analysis of neighborhood-level data and enhance well being for communities and reentering prisoners. Partners use mapping to pinpoint neighborhoods with high concentrations of returning prisoners and see how well such communities can address the prisoner reentry challenges. Analytical findings help to mobilize community members and leaders to effectively target and address reentry-related problems. This panel gives an overview of the RMN model, followed by presentations by two of the six pilot sites, Winston-Salem, North Carolina (establishing effective community assets), and Milwaukee, Wisconsin (strengthened coordination of service providers).

Jim B. Pingel **Wisconsin Sentencing Commission**

Reentry Mapping Network: Using Spatial Data to Inform Local Prisoner Reentry Efforts

(Jim B. Pingel, Nancy G. La Vigne, Sylvia Oberle, Jamie Watson)

The Reentry Mapping Network (RMN) is a partnership among community-based organizations and The Urban Institute, designed to create community change through the mapping and analysis of neighborhood-level data and enhance well being for communities and reentering prisoners. Partners use mapping to pinpoint neighborhoods with high concentrations of returning prisoners and see how well such communities can address the prisoner reentry challenges. Analytical findings help to mobilize community members and leaders to effectively target and address reentry-related problems. This panel gives an overview of the RMN model, followed by presentations by two of the six pilot sites,

Winston-Salem, North Carolina (establishing effective community assets), and Milwaukee, Wisconsin (strengthened coordination of service providers).

Geographic Profiling and Forecasting I *Georgian*

Advanced

Moderator

Akiva Liberman — **National Institute of Justice**

Presenters

Wilpen L. Gorr — **Carnegie Mellon University**

Bottom Line on Crime Forecasting

The research presents comprehensive results of crime forecast experiments in two northeastern U.S. cities. The results provide evidence that high volume crimes can be forecast accurately (10 to 20 percent error) in areas as small as car beats. It compares simple forecast methods with advanced methods, including a neighborhood-type method of estimating crime seasonality and leading indicator models. Investigators believe that crime forecasts coupled with hot spot methods will advance the crime mapping state-of-art.

Brent Snook — **University of New Brunswick**

Process and Outcome Analysis of Predictions on a Geographic Profiling Task

(Brent Snook, Craig Bennell, Paul J. Taylor, Michele Zito)

This talk on geographic profiling will present the results of an examination of (1) the cognitive strategies people use to make predictions on the geographic profiling task, (2) the accuracy of predictions in relation to different strategies, (3) when and why particular strategies succeed and fail, (4) the possibility of training officers to improve their decisionmaking, (5) the complexity of different strategies, and (6) providing fast, frugal, and accurate methods for making geographic predictions.

Jasper J. van der Kemp — **Netherlands Institute for the Study of Crime and Law Enforcement**

Geographic Profiling, Minus Math Add Psychology

Establishing the factors that influence criminal location choice is essential for further developing geographical profiling. Geographical profiling entails a reversal of a theory of location choice and could profit from elaboration on the theory with examples of cases of serial burglary and rape. The presentation discusses the importance of knowing factors that influence criminal location choice. It demonstrates that geographical profiling must branch out from using only the topographic location information, where a crime has been committed (in a mathematical model), to incorporating psychological concepts, which can determine the weight to be assigned for crimes in a profiled series.

GIS Applications I (Web Systems) *Clarendon*

General Audience

Moderator

Michael O'Shea **National Institute of Justice**

Presenters

Joe Kezon **Chicago Police Department**

CLEAR GIS

(Joe Kezon, Scot Hamilton)

The Chicago Police Department (CPD) is using GIS to supplement the department's CLEAR (Citizens Law Enforcement Analysis and Reporting) initiative. CPD has developed an extensive database of criminal information that is available through the web. As officers use the web-based queries, all returned information will be able to be displayed using ArcIMS. Based on the original query, additional mapping functionality will be available to the officer for further analysis. This system will replace the CPD's present antiquated systems. The system uses ArcIMS, ArcSDE, ArcSDE, Java API, and a RDBMS.

David Martin **Wayne State University**

Mapping Out "The Dirty Dozen": A Web-Enabled, Parcel-Based Crime Mapping and Analysis System

Police and prosecutors in Detroit, Michigan, are increasingly using civil remedies such as code enforcement, nuisance abatement, and drug forfeiture to address persistent trouble spots in the community. This paper describes a web application built using ArcIMS, Coldfusion, and Microsoft Access to support a dynamic mapping and analysis system that automatically identifies the top crime producers according to crime and calls for service data. The system links a variety of datasets, at the parcel-level, to provide instant information on crime history for places, ownership, community groups, and other factors that are important considerations in light of civil enforcement.

Steven Rose **West Midlands Police Department**

COSMOS – Community Safety Mapping On-Line System: A Web-Based GIS Informing Partnership Information and Intelligence Management

COSMOS is a web site that has been created for Birmingham Community Safety Partnership. It is designed as a central point of contact for agencies in Birmingham and the West Midlands. The system provides access to multi-agency data through standard reports and easy to use mapping and analysis tools. Data is reported in standard agency geographies, allowing data and information to be compared and analyzed together while maintaining maximum flexibility. The website is a tool to aid true partnership working and information sharing engaging the less PC literate users.

GIS for Public Safety I (Bio-terrorism) *Arlington*

Intermediate

Moderator

Jane L. Garb **Baystate Medical Center**

Presenters

James G. Glass **San Antonio Police Department**

The Role of GIS and the Crime Analyst in Homeland Security Preparedness and Emergency Operations

(James G. Glass, Jeffrey Moore)

Many crime/intelligence analysts have taken on new responsibilities since the September 11 tragedies, including dealing with homeland security preparedness. The focus of this presentation will be on the crime analysts' role in supporting first responders (primarily police and fire personnel) with critical spatially enabled information for decision support and event management. Special attention will be placed on key areas of planning, mitigation, preparedness, response, and recovery from a police perspective. Examples from a recent mock terrorist exercise held in San Antonio, Texas, will also be presented.

Tom Rich **Abt Associates Inc.**

Mapping Resources Necessary for Responding to Bioterrorism

A web-based tool for compiling an inventory of critical healthcare and other emergency resources needed to respond to a bioterrorist attack is being tested in an eight-county region of east-central Pennsylvania. After initial implementation, a series of mapping capabilities, utilizing ESRI's web services platform, will be added to the tool, including driving directions, distance calculations based on existing road networks, and thematic mapping showing the distribution and status of resources. This presentation will discuss the bioterrorism inventory tool, the web services approach to mapping, and the value that mapping has added to the tool.

Jane L. Garb **Baystate Medical Center**

Areal Interpolation of Census Data for Disaster Preparedness and Response

(Jane L. Garb, Robert W. Cromley)

The session presents several methods for estimating census population data for geographic units relevant in the context of disaster preparedness and response. Boundaries for drainage sub-basins, the area covered by the plume of a toxic release, police sectors, etc. do not usually coincide with those for census collection units (tracts, block groups, etc.). for which population data is available. Counts or rates for these non-standard units may be estimated by various areal interpolation methods. This presentation will show how to estimate affected populations on-the-fly, in response to a disaster, and how to maintain updated data in preparation for future unplanned events.

Local, Regional, and Federal Mapping Initiative I (NLECTC) *Berkeley*

General Audience

Moderator

Robert W. Donlin — **National Law Enforcement and Corrections Technology Center - Southeast**

Presenters

Sean Bair — **National Law Enforcement and Corrections Technology Center - Rocky Mountain**

and

Dan Helms — **National Law Enforcement and Corrections Technology Center - Rocky Mountain**

and

Robert W. Donlin — **National Law Enforcement and Corrections Technology Center - Rocky Mountain**

Crime Mapping Assistance from NLECTC

This presentation will provide valuable information on how practicing crime analysts and police professionals, as well as academic researchers in the field of crime analysis, can utilize the technology transfer and direct assistance remit of the National Law Enforcement and Corrections Technology Center system. It focuses on crime mapping and tactical crime analysis assistance from the Rocky Mountain Center located in Denver and in particular on the Crime Mapping and Analysis Program.

Spatial Analysis and Research I (Hot Spots) *Plaza Ballroom*

Intermediate

Moderator

Kenneth M. Johnson — **Seattle Police Department**

Presenters

Alan J. Brimicombe — **University of East London**

On Being More Robust About Hot Spots

Within GIS-based identification of hot spots, two new, complementary techniques are described and applied. First is a variable resolution approach to cluster detection that overcomes many problems of traditional point density estimation and provides a bridge between hot spot detection based on incident counts and hot spot detection based on risk. Second is a method of robust data normalization that readily identifies outliers. When applied to traditional choropleth mapping, it identifies count- and/or risk-based hot spots consistent with point density approaches. Applied to variable resolution clustering of counts and risks, it becomes a decision-making tool for problem-oriented policing.

Jason R. Dalton — **University of Virginia**

Maximum Likelihood Model for Criminal Events – Using Environmental Features to Build a More Complete View of a Region

The generally applied practice of spatial modeling based on coordinate location largely

follows statistical methods that were not intended for use in the geographic space. This presentation shows a method of maximum likelihood estimates of density, based on data collected for the surrounding environment. Examples of the application of this concept will be shown, with a description of the statistical basis.

Kenneth M. Johnson **Seattle Police Department**

Visualization of Crime Activity in 2D, 3D, and 4D

Portraying changes in crime levels assists police deployment by identifying successes, tracking displacement, and monitoring the effect of emphasis patrols. There are a variety of ways to graphically display these changes. This presentation catalogs the toolbox of methods that show crime trends, use of hot spots, or three-dimensional imagery, and dynamic images of crime distribution with animation. In the future, use of hot links to film clips and Web cameras will further expand the GIS toolbox. Examples of all the above tools will be displayed, and implications for the future will be discussed.

2:30 pm - 3:00 pm **Break**

3:00 pm - 4:30 pm **Concurrent Panels**

Spatial Technology Showcase Session *Hancock*

General Audience

Corrections, Probation, and Parole II *Stanbro*

General Audience

Moderator

Andrew L. Goldberg **National Institute of Justice**

Presenters

Frances Frick Burden **Pennsylvania State University**

Neighborhood Structural Determinants of Recidivism: A Multilevel Study of Parolees in Their Neighborhoods

GIS-based technologies have made it easier for researchers to identify specific neighborhood factors that mitigate or contribute to an individual's likelihood of recidivation. This study investigates the effect of neighborhood characteristics on a parolee's likelihood of recidivism, and particularly whether there are some "at risk" neighborhoods that increase a parolee's risk of rearrest. The key question is whether parolees who live in socially disorganized neighborhoods (e.g., high levels of residential mobility and a large number of criminal "hotspots" such as bars) are more likely to recidivate than parolees who are released into more socially organized neighborhoods.

George F. Rengert **Temple University**

Identifying the Spatial Pattern of Crime Within Large Buildings
Correctional officers, campus police, and security officers for retail and office buildings are concerned with where crime and disturbances are likely to occur within buildings. Since crime can be a rare occurrence, these patterns are not always obvious to the casual viewer, even when it is mapped within the building. For example, one crime may occur in each restroom which is located on a vertical plane within the building. In this presentation, methods of mapping crime and objectively identifying their spatial pattern are illustrated using actual data from a high rise building and high-definition GIS.

John E. Urbahns **City of Ft. Wayne**

But They All Come Back…How One Community Used GIS to Promote Their Reentry Initiative
(John E. Urbahns, Stan Pfulger)
The promotion of a reentry initiative to community leaders and the general public can make or break a well-designed program. In order to promote its ReEntry Court project, Allen County, Indiana, turned to GIS. Using GIS, officials demonstrated not just a concentration of the returning prisoner population but also a concentration of social factors that would hinder successful reintegration into society. With maps and the supportive data in hand, officials were able to turn skepticism into support.

Geographic Profiling and Forecasting II *Georgian*
Advanced

Moderator

Akiva Liberman **National Institute of Justice**

Presenters

Peter Branca **Melbourne University Private**

Geographic Profiling in Australia: An Examination of the Predictive Potential of Serial Armed Robberies in the Australian Environment
International research indicates that spatial crime patterns can be used to predict the likely home base of a serial offender (often referred to as "geographic profiling"). This presentation explores the predictive potential of analysed serial armed robberies in the Australian environment. The research data consists of 240 armed robbery offences, involving over 24 serial offenders. Utilizing MapInfo and CrimeStat software, journey-to-crime (JTC) and centrography prediction techniques were used to identify the likely home location of the serial offenders. The results give support to international research, which indicates that it is possible to reduce the area in which a serial offender is likely to live.

Michael Leitner **Louisiana State University**

Using Functional Distance Measures When Calibrating Journey-to-Crime Distance Decay Algorithms
(Michael Leitner, Josh Kent)
This research examines the value of temporal distance metrics for use in geographic profiling

techniques. By measuring the impedance values stored within a transportation data layer, traditional Euclidean distance metrics can be substituted with time-based functional distance values. Offender residency is estimated using three different distance decay algorithms. Results are analyzed to determine if the temporal metric can serve as a substitute for traditional Euclidian distances when estimating the likely residence of a localized serial offender. Additionally, the 'best' distance decay algorithm leading to the most 'accurate' geographic profile is identified.

Lorie Velarde **Garden Grove Police Department**

Applying Geographic Profiling to Property Crimes
Geographic profiling is an advanced crime analysis technique used in the last decade in cases of serial crime. Due to the expense of software and length of training involved, the tool was until recently used primarily by a few highly trained profilers in cases of violent crime and was limited to large police agencies. The Geographic Profiling Analyst program applies this tool to property crime and brings it within the reach of most police departments. The presenter participated in this program in May 2003 and has since been able to utilize this technique successfully in the department.

GIS Applications II (Systems for Sharing Data) *Clarendon*

General Audience

Moderator

Connor T. Fee **University of Virginia**

Presenters

Patricia Lankey **Lucas County Information Services**

Regional GIS for Homeland Security and Beyond
(Patricia Lankey, Leslie Rhegness)
This presentation will show how a county GIS for Homeland Security spurred the initiation of the use of GIS in many county agencies and the start of a regional, 21 county GIS. The presentation will focus on multi-agency involvement, homeland security, mapping for homeland security, and GIS applications.

Michael L. Thomas **U.S. Department of Defense**

National Guard Digital Mapping Server Portal: Embodying a "One-Stop" Portal Approach for Total GIS Needs
(Michael L. Thomas, Nick Faust, Melinda K. Higgins, Frank McCreedy, John Sample, Kevin Shaw, Rickey Thomas)
The National Guard Bureau Counterdrug Office has implemented a Digital Mapping Server (DMS) portal, embodying a "One-Stop" portal approach for total GIS needs. DMS supports various GIS requirements with open source mapping data and tools provided at no-cost to law enforcement, saving time, money, and effort.

Connor T. Fee **University of Virginia**

GRASP — A Geospatial Repository for Analysis and Safety Planning
(Connor T. Fee, Ryan K. Grammer)
The University of Virginia Systems and Information Engineering Department has been commissioned by the National Institute of Justice to develop the Geospatial Repository for Analysis and Safety Planning (GRASP). GRASP is a website that allows users to share spatial data instantaneously with other members of the GIS community. Once a user uploads data in any acceptable format, that data is automatically available to all other users in any format they choose. Registered users who are approved by the NIJ can access any available public data. The aim of GRASP is to have data contributors from 40 states in the next 3 years.

GIS for Public Safety II (Arson and Fire Investigation) *Arlington*

General Audience

Moderator

Paul E. Keating **City of Roseville Fire Department**

Presenters

Andrew R. Brumwell **West Midlands Police**

Mapping Arson, Reducing Crime, and Preventing Arsonists — Using GIS Within a Multi Agency Arson Taskforce
West Midlands Police and West Midlands Fire Service are joining together to form an Arson Taskforce, part of a national initiative to encourage police and fire services to work together, to share data and intelligence, and reduce arson-related incidents. There is however a "gulf of understanding" between the two organizations as to how incidents are recorded in the first place and a lack of understanding as to how GIS can assist working together to reduce arson and improve detection rates.

Donald R. Oliver **Wilson Fire/Rescue Services**

Increasing Our RESPONSE-Ability
The Fire Chief of Wilson, North Carolina, shares the experiences of the Wilson Fire/Rescue Services in implementing Geographic Information Systems (GIS) technology over the past four years. In this overview program, listeners will be exposed to the latest information for applying GIS technology to the fire service, including how to employ it for community risk assessment, arson, crime problem identification, and planning for homeland security. The presentation demonstrates practical tools, tips, and capabilities of GIS technology and gives examples of GIS software packages that can be used in deployment planning. Chief Oliver will also speak about forming partnerships in a community, including experiences with the Police Department and Information Technology Services that have improved the safety and quality of life in the Wilson community.

Paul E. Keating **City of Roseville Fire Department**

Roseville Fire Implements GIS to Streamline Planning for Emergency Response
The Roseville City Fire Department has implemented GIS technology to strategically plan

for growth and assess standards of coverage. Roseville is one of northern California's fastest growing cities, and GIS has been crucial in the city's station placement resource allocation study. The city fire department is currently conducting a review of its Standards of Coverage as part of the accreditation process; GIS is proving invaluable in assessing the areas of greatest risk and places where the resources are needed.

Local, Regional, and Federal Mapping Initiative II (HIDTA) *Berkeley*

General Audience

Moderator

Brett Chapman — **National Institute of Justice**

Presenters

Philip Burkhart — **National Drug Intelligence Center**

GIS Applications of National Drug Threat Survey Data

The U.S. Department of Justice National Drug Intelligence Center (NDIC) produces strategic domestic drug intelligence to support national policymakers and law enforcement officials. The National Drug Threat Survey (NDTS) serves as an instrument by which the NDIC surveys state and local law enforcement agencies in order to identify threats, trends, and patterns posed by the illicit drug trade. Data from the NDTS is used in a GIS to gain a greater understanding of the illicit drug threat.

Thomas Hayden — **Pima County Sheriff's Department**

COBIJA Interdiction SitMap

This presentation provides an interactive situation map that graphically portrays the locations and supporting intelligence data for Southwest Border drug seizures, currency seizures, aircraft fades, border violence, and known drug seizures within Mexico. Currently the GIS-SITMAP is maintained daily throughout the year at the Arizona High Intensity Drug Trafficking Area (HIDTA) Intelligence Division. The SIT-MAP is the first comprehensive intelligence overview of the entire Southwest Border (growing nationally to include Canada) that operators, intelligence analysts, and decisionmakers are able to access electronically. The SIT-MAP is constantly updated as new seizure reports and other intelligence data is received at the Arizona HIDTA Intelligence Division. Users will be able to query selective information tailored to their unique requirements.

Andrew Newton — **University of Liverpool**

On the Buses: An Evaluation of a Safer Travel Initiative

(Andrew Newton, S.D. Johnson, K.J. Bowers)

This paper reports the main findings of an evaluation of an intensive 4-week policing operation along a single bus corridor that was aimed at reducing the extent and associated fear of crime on buses. The evaluation adopts a mixture of qualitative evaluation techniques and demonstrates that the operation was successful in increasing officer arrest rates and in reducing crime levels for particular types of crime. A conceptual discussion is provided as to how to measure the effectiveness of an operation with no geographically predefined action area and to define the relationship between action areas and displacement or diffusion zones.

Spatial Analysis and Research II (Criminal Behavior) *Plaza Ballroom*

Intermediate

Moderator

Steven Rose **West Midlands Police Department**

Presenters

Gaston Pezzuchi **Buenos Aires Province Police Department**

Success in the Field – Crime Mapping and S.A.R.A. in the Buenos Aires Province of Argentina

(Gaston Pezzuchi, Jorge Ortiz, Marisa Paviskov)

After a series of community uproar events, the Buenos Aires Province Security System requested the Argentinean National Forces to provide officers in an attempt to stop the "crime rage" in the Conurbano Area (which is about 5000 square kilometers and has about 9,500,000 inhabitants). Using the well established Crime Mapping and Analysis Unit, law enforcement focused on particular areas and deployed different response strategies. These strategies involved the coordination of Federal and Provincial efforts, and monitoring and evaluation after actions were taken. A series of protocols were developed to measure the effect of the program, and for the first time in a long time, the agency was able to report, not only success, but also how it had been measured.

Caterina Gouvis Roman **The Urban Institute**

Routine Activities of Youth and Neighborhood Violence: Spatial Modeling of Place, Time, and Crime

This paper discusses how GIS and spatial analysis are used to model the relationship between the daily routine activities of youth and levels of violence, and provides an example of how these techniques can be applied to analytical studies examining risk of violence in places. Specifically, this paper highlights how time of day, week and year, can be incorporated into spatial analysis of crime patterns to further inform crime prevention. A model of opportunity factors is developed to predict the spatial and temporal relationship between violence, schools, youth hangouts, retail properties, and neighborhood (dis)organization across census blocks.

Steven Rose **West Midlands Police Department**

Criminal as Customers – Applying the Principles of Customer Relationship Management and the Use of Geodemographics to Policing

This paper applies Customer Relationship Management principles and the use of geodemographics to policing and community safety. The techniques used by companies world-wide to best manage their customer base and to target potential customers can be applied to a policing environment. Calculating expected crime rates for reporting areas through modeling customer behavior creates a more sophisticated benchmark to monitor performance. Applications for this are more intelligent performance monitoring and target setting, offender/victim management, and territory balancing.

5:00 pm - 6:30 pm **International Roundtable** ***Stanbro***

Moderator

John Markovic **Vera Institute of Justice**

Presenters

Ronald E. Wilson **University of Michigan/MAPS Program**

John Markovic **Vera Institute of Justice**

International Roundtable

Consistent with past conferences, and in consideration of advances in crime mapping in many developing countries, the M.A.P.S. program is hosting a round table on International Crime Mapping Issues. This roundtable will serve as a venue to network, discuss common concerns, and compare successes/challenges in crime mapping efforts that are being implemented in developing countries. While all interested parties are encouraged to attend, this round table will be of particular interest to conference attendees from developing countries. This is intended to an open-discussion forum, and attendee participation will be encouraged. Some of the topics that were relevant to that conference, and may be of interest to international attendees, included:

- Crime mapping issues that are unique to developing countries;
- The challenges of implementing crime mapping in emerging democracies;
- The benefits and limitations associated with highly-centralized police agencies;
- Developing partnerships between police, universities and non-governmental organizations (NGOs);
- Guarding against the potential of using crime mapping for oppressive purposes;
- Guarding against the potential of maps to reinforce stereotypes and ethnic/class conflict;
- Engaging citizens as participants in crime mapping; and
- The need for a crime mapping and analysis list-serv for non-English speaking participants.

Finally, this roundtable will provide examples of efforts in other countries to gauge the level and progress of crime mapping. Given that many participants of this round table get together only once a year, it is important to stay informed of progress in the interim. Such topics include:

- Surveys can be developed and reported;
- Coalitions or working groups between countries might be formed; and
- Writing of an international report on efforts by a country or group of countries.

This roundtable is intended to stimulate conversation and to further peer-to-peer information sharing, collaboration and the forming of mechanisms that is increasingly international in scope.